SELF-LEARNING ROLLING-CODE RADIO CONTROLS 433.92 MHZ FREQUENCY

BFT
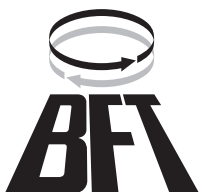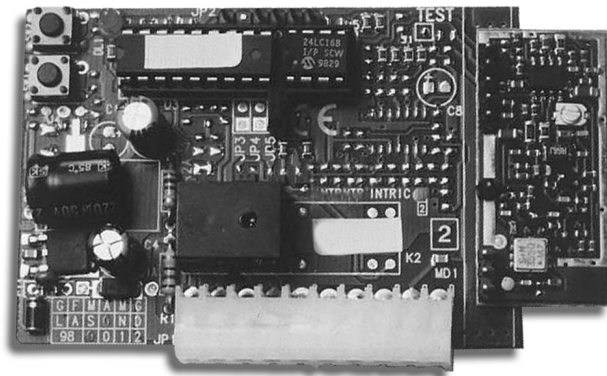
1) GENERAL OUTLINE

Thank you for buying this product, our company is sure that you will be more than satisfied with the performance of the product. Read the "**Instruction Manual**" supplied with this product carefully, as it provides important information about safety, installation, operation and maintenance.This product conforms to recognised technical standards and safety regulations. It complies with the 89/336/EEC, 1999/5/CEE, European Directive and subsequent amendments. This product complies with recognised technical standards and safety regulations. Self-learning rolling-code radio receiver system. This is used to configure impulse or bistable or timed outputs. It can also memorize **TEO 1-2-4** series (non rolling-code) transmitters. The **INTRIC/TRC-MITTO** system is compatible with the **EElink** protocol for fast installation and maintenance.

2) GENERAL SAFETY

WARNING! An incorrect installation or improper use of the product can cause damage to persons, animals or things.
- The "**Warnings**" leaflet and "**Instruction booklet**" supplied with this product should be read carefully as they provide important information about safety, installation, use and maintenance.
- Scrap packing materials (plastic, cardboard, polystyrene etc) according to the provisions set out by current standards. Keep nylon or polystyrene bags out of children's reach.
- Keep the instructions together with the technical brochure for future reference.
- This product was exclusively designed and manufactured for the use specified in the present documentation. Any other use not specified in this documentation could damage the product and be dangerous.
- The Company declines all responsibility for any consequences resulting from improper use of the product, or use which is different from that expected and specified in the present documentation.
- Do not install the product in explosive atmosphere.
- The construction components of this product must comply with the following European Directives:It complies with the 89/336/EEC, 1999/5/CEE, European Directive and subsequent amendments. As for all non-EEC countries, the above-mentioned standards as well as the current national standards should be respected in order to achieve a good safety level.
- The Company declines all responsibility for any consequences resulting from failure to observe Good Technical Practice when constructing closing structures (door, gates etc.), as well as from any deformation which might occur during use.
- The installation must comply with the provisions set out by the following European Directives:It complies with the 89/336/EEC, 1999/5/CEE, European Directive and subsequent amendments.
- Disconnect the electrical power supply before carrying out any work on the installation. Also disconnect any buffer batteries, if fitted.
- Fit an omnipolar or magnetothermal switch on the mains power supply, having a contact opening distance equal to or greater than 3mm.
- Check that a differential switch with a 0.03A threshold is fitted just before the power supply mains.
- Check that earthing is carried out correctly: connect all metal parts for closure (doors, gates etc.) and all system components provided with an earth terminal.
- Fit all the safety devices (photocells, electric edges etc.) which are needed to protect the area from any danger caused by squashing, conveying and shearing.
- Position at least one luminous signal indication device (blinker) where it can be easily seen, and fix a Warning sign to the structure.
- The Company declines all responsibility with respect to the automation safety and correct operation when other manufacturers' components are used.
- Only use original parts for any maintenance or repair operation.
- Do not modify the automation components, unless explicitly authorised by the company.
- Instruct the product user about the control systems provided and the manual opening operation in case of emergency.
- Do not allow persons or children to remain in the automation operation area.
- Keep radio control or other control devices out of children's reach, in order to avoid unintentional automation activation.
- The user must avoid any attempt to carry out work or repair on the automation system, and always request the assistance of qualified personnel.
- Anything which is not expressly provided for in the present instructions, is not allowed.

3) TECHNICAL SPECIFICATIONS

Frequency: 433.92MHz
Operating temperature: .... -20 / +55°C
Coded by means of: .... Rolling-code Algorithm
No. combinations: .... 4 million
Dimensions: .... see fig.1

3.1) Receiver

Power supply: .... from 12 to 28Vdc, from 16 to 28Vac
Antenna impedance: 50Ohm (RG58)
Relay contact: .... 1A - 33Vac, 1A 24Vdc
Max No. radio control to be memorised: 128

Receiver versions	N° radio control
Intric	128
Intric 512	512
Intric 2048	2048

Receiver versions: **INTRIC1** -single-channel, **INTRIC2** - double-channel.

3.2) Transmitter MITTO

Keys: .... Yellow
Power supply: .... Two 3V lithium batteries (type CR2016)
Range: .... 50 / 100 metres
Transmitter versions: **MITTO2** - double-channel, **MITTO4** - four-channel.

3.3) Transmitter TRC

Keys: .... Red
Power supply: .... 12V Alkaline battery
Range: .... 50 / 100 metres
Transmitter versions: **TRC1**-single-channel, **TRC2**-double-channel, **TRC4**-four-channel.

4) ANTENNA INSTALLATION

Use an antenna tuned to 433MHz. For Antenna-Receiver connection, use an RG58 coaxial cable. The presence of metallic masses close by the antenna can interfere with radio reception. In case of poor transmitting range, move the antenna to a more suitable site.

5) PROGRAMMING

The receivers are provided with a "JP5" jumper (fig.2) which is used to enable the transmitters to be memorized, in **MANUAL** or **SELF-LEARNING** mode by radio. Having inserted the receiver in the connector provided with the control unit, enter the programming mode by pressing the SW1 button for INTRIC 1 or, in case of INTRIC 2, the SW1 button for the CH1 output and SW2 button for CH2 output. This condition is signalled by constant blinking of the DL1 LED. The DL1 LED blinker packs (fig.2), which range from 1 to 6 blinks interrupted by a pause of about 1 second, indicate the different learning functions (see table). The receiver comes out of the programming mode if no operations take place during the subsequent 90 seconds.

5.1) Transmitter memory storage in manual mode (JP5 closed)
Select the required function from the table. When the operating method has been understood, proceed as follows:
a) Preset the receiver to the required function (see table) and check the DL1 LED blinker packs.
b) Send the transmitter secret code. In the case of TRC1-2/MITTO2-4, press the P1 hidden button (fig.2). In the case of TRC4, the P1 button function corresponds to pressing the 4 transmitter buttons simultaneously or, after opening the battery compartment, bridging the two P1 points with a screwdriver (fig.2).
Note: For the TEO 1-2-4 series, enter the personal code with the 10-way Dip-switch provided with the transmitter and press the T key of the transmitter which is to be memorised.
c) Press the T key of the transmitter which is to be memorised. The key of that transmitter is now stored.
d) To memorise other transmitters, repeat the sequence from point (b) within a maximum time of about 10 seconds, otherwise the receiver will come out of the programming mode.

5.2) Transmitter memory storage in self-learning mode by radio (JP5 open)
This procedure permits to copy the keys of a transmitter previously stored to a receiver without having to operate on the receiver inside the box.
NOTE: The transmitters belonging to the TEO 1-2-4 series (without rolling-code) can only be stored MANUALLY.
The first transmitter must be memorized in manual mode (see paragraph 5.1). **Note:** with JP5 open, you can also carry out memory storage in manual mode. Leaving the JP5 bridge open, and having a MITTO transmitter already memorized in the receiver, you can also memorize other transmitters by radio, as explained below:
a) Send the secret code of the transmitter already memorised. In the case of TRC1-2/MITTO2-4 transmitters, press the hidden P1 button (fig.2). In the case of TRC4, the P1 button function corresponds to pressing the 4 transmitter buttons simultaneously or, after opening the battery compartment, bridging the two P1 points with a screwdriver (fig.2).
b) Press the T key which is also to be assigned to the new transmitter.
c) Transmit the secret code of the new transmitter to be memorized.
d) Press the T key which is to be assigned to the new transmitter.
e) To memorise another transmitter, repeat the sequence from step (c)

within a maximum time of 10-15 seconds, otherwise the receiver will come out of the programming mode.

f) To copy another key, repeat the sequence from step (a) and wait for the receiver to come out of the programming mode (or disconnect the receiver from the power supply). **Note: Maximum protection from memory storage of foreign codes is obtained by presetting the JP5 jumper closed and programming in MANUAL mode or by means of the UNIPRO mod. programmer.**

5.3) UNIPRO mod. Universal programmer (Fig.4-Fig.5)

To use the programmer, see the respective instructions. **Transmitter** - Connect the **UNIPRO** programmer to the transmitter by means of the **UNITRC/UNIMITTO** and **UNIFLAT** accessories supplied. **Receiver** - Connect the **UNIPRO** programmer to the **INTRIC** receiver by means of the **UNIDA** and **UNIFLAT** accessories supplied. The system will not support the power input of the **UNIPRO** programer.

6) MAINTENANCE

The maintenance of the system should only be carried out by qualified personnel regularly. The MITTO transmitters are supplied by two 3V lithium battiers (type CR2016). T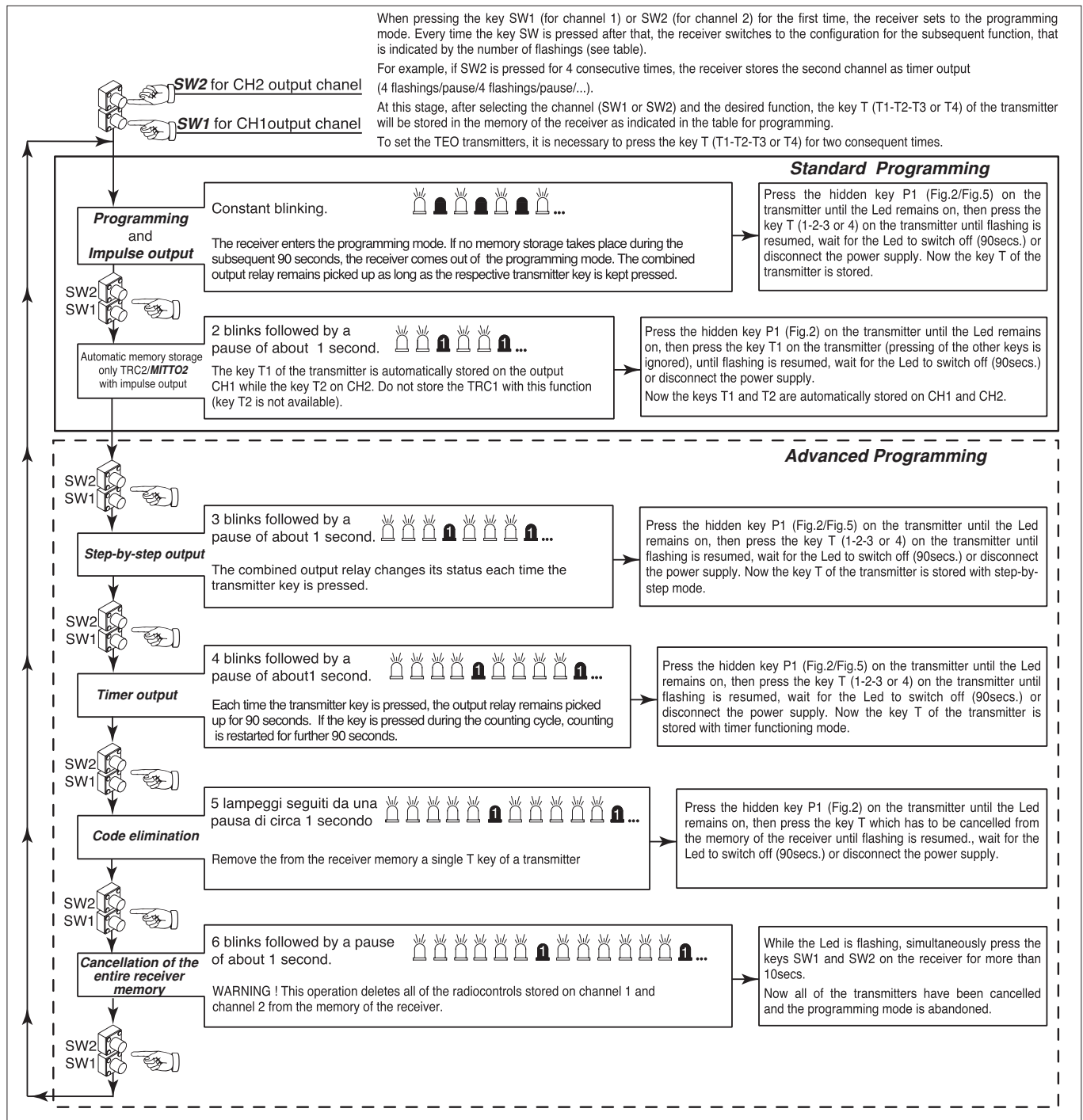he TRC transmitters are powered by a 12V alkaline battery. When replacing the batteries type CR2016 do not touch the poles with the hands.

Any reduction in the transmitter capacity may be due to the batteries getting flat. When the led of the transmitter flashes, it means that the batteries are flat and must be replaced.

7) DISPOSAL

ATTENTION: disposal should only be carried out by qualified personnel. Materials must be disposed of in conformity with the current regulations. In case of disposal, the system components do not entail any particular risks or danger. In case of recovered materials, these should be sorted out by type (electrical components, copper, aluminium, plastic etc.).

For battery disposal, refer to the current regulations.

The descriptions and illustrations contained in the present manual are not binding. The Company reserves the right to make any alterations deemed appropriate for the technical, manufacturing and commercial improvement of the product, while leaving its essential features unchanged, at any time and without undertaking to update the present publication.

When pressing the key SW1 (for channel 1) or SW2 (for channel 2) for the first time, the receiver sets to the programming mode. Every time the key SW is pressed after that, the receiver switches to the configuration for the subsequent function, that is indicated by the number of flashings (see table).

For example, if SW2 is pressed for 4 consecutive times, the receiver stores the second channel as timer output (4 flashings/pause/4 flashings/pause/...).

At this stage, after selecting the channel (SW1 or SW2) and the desired function, the key T (T1-T2-T3 or T4) of the transmitter will be stored in the memory of the receiver as indicated in the table for programming.

To set the TEO transmitters, it is necessary to press the key T (T1-T2-T3 or T4) for two consequent times.

SW2 for CH2 output chanel
SW1 for CH1 output chanel

Standard Programming

Programming and Impulse output

SW2
SW1

Constant blinking.

The receiver enters the programming mode. If no memory storage takes place during the subsequent 90 seconds, the receiver comes out of the programming mode. The combined output relay remains picked up as long as the respective transmitter key is kept pressed.

Press the hidden key P1 (Fig.2/Fig.5) on the transmitter until the Led remains on, then press the key T (1-2-3 or 4) on the transmitter until flashing is resumed, wait for the Led to switch off (90secs.) or disconnect the power supply. Now the key T of the transmitter is stored.

Automatic memory storage only TRC2/**MITTO2** with impulse output

2 blinks followed by a pause of about 1 second.

The key T1 of the transmitter is automatically stored on the output CH1 while the key T2 on CH2. Do not store the TRC1 with this function (key T2 is not available).

Press the hidden key P1 (Fig.2) on the transmitter until the Led remains on, then press the key T1 on the transmitter (pressing of the other keys is ignored), until flashing is resumed, wait for the Led to switch off (90secs.) or disconnect the power supply.
Now the keys T1 and T2 are automatically stored on CH1 and CH2.

Advanced Programming

SW2
SW1

Step-by-step output

3 blinks followed by a pause of about 1 second.

The combined output relay changes its status each time the transmitter key is pressed.

Press the hidden key P1 (Fig.2/Fig.5) on the transmitter until the Led remains on, then press the key T (1-2-3 or 4) on the transmitter until flashing is resumed, wait for the Led to switch off (90secs.) or disconnect the power supply. Now the key T of the transmitter is stored with step-by-step mode.

SW2
SW1

Timer output

4 blinks followed by a pause of about 1 second.

Each time the transmitter key is pressed, the output relay remains picked up for 90 seconds. If the key is pressed during the counting cycle, counting is restarted for further 90 seconds.

Press the hidden key P1 (Fig.2/Fig.5) on the transmitter until the Led remains on, then press the key T (1-2-3 or 4) on the transmitter until flashing is resumed, wait for the Led to switch off (90secs.) or disconnect the power supply. Now the key T of the transmitter is stored with timer functioning mode.

SW2
SW1

Code elimination

5 lampeggi seguiti da una pausa di circa 1 secondo

Remove the from the receiver memory a single T key of a transmitter

Press the hidden key P1 (Fig.2) on the transmitter until the Led remains on, then press the key T which has to be cancelled from the memory of the receiver until flashing is resumed., wait for the Led to switch off (90secs.) or disconnect the power supply.

SW2
SW1

Cancellation of the entire receiver memory

6 blinks followed by a pause of about 1 second.

WARNING ! This operation deletes all of the radiocontrols stored on channel 1 and channel 2 from the memory of the receiver.

While the Led is flashing, simultaneously press the keys SW1 and SW2 on the receiver for more than 10secs.
Now all of the transmitters have been cancelled and the programming mode is abandoned.

SW2
SW1

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PROGRAMMAZIONE BASE - BASIC PROGRAMMING - PROGRAMMATION DE BASE - BASIS-PROGRAMMIERUNG - PROGRAMACIÓN BASE - PROGRAMAÇÃO BASE

I **PROGRAMMAZIONE BASE INTRIC2**
Uscita impulsiva 1 e 2 (per comandare ad esempio lo start di una centrale di comando e l'apertura pedonale della stessa)

F **PROGRAMMATION DE BASE INTRIC2**
Sortie impulsive 1 et 2 (pour commander par exemple le start d'une unité de commande et l'ouverture piétonne de l'unité)

E **PROGRAMACIÓN BASE INTRIC2**
Salida impulsiva 1 y 2 (para activar, por ejemplo, el start de una central de mando y la apertura peatonal de la misma)

GB *BASIC PROGRAMMING OF INTRIC2*
Impulsive output 1 and 2 (to activate, for example, a control unit and its pedestrian opening)

D *BASIS-PROGRAMMIERUNG INTRIC2*
Impuls-Ausgang 1 und 2 (um zum Beispiel den Start einer Steuerzentrale und deren Fußgängeröffnung zu befehligen)

P *PROGRAMAÇÃO BASE INTRIC2*
Saída impulsiva 1 e 2 (para comandar por exemplo o start de uma central de comando e a função abertura do postigo da mesma)
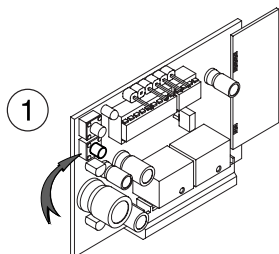
1 Premere una volta il tasto SW1
Press the key SW1 once
Appuyer une fois sur la touche SW1
Einmal die Taste SW1 drücken.
Presione una vez la tecla SW1
Pressionar uma vez a tecla SW1
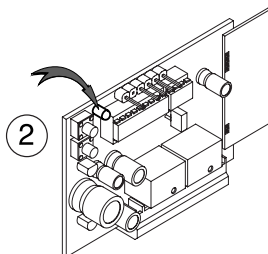
2 IL Led comincia a lampeggiare
The Led begins to flash
La led commence à clignoter
Die Led beginnt zu blinken.
El led empieza a parpadear
O led começa a piscar
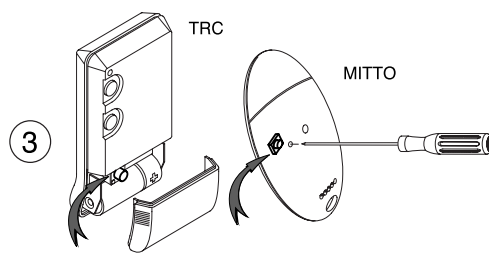
3 Premere il tasto P1 fino a che il Led del ricevitore resta acceso
Press the key P1 until the Led of the receiver stays on
Appuyer sur la touche P1 jusqu'à ce que la Led du récepteur reste allumée
Die Taste P1 drücken, bis die Led des Empfängers eingeschaltet bleibt.
Presione la tecla P1 hasta que el led del receptor se encienda
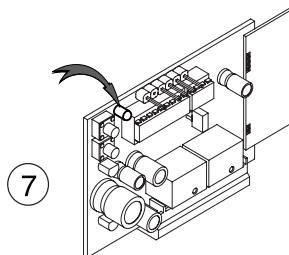*Pressionar a tecla P1 até que o Led do receptor fica aceso*
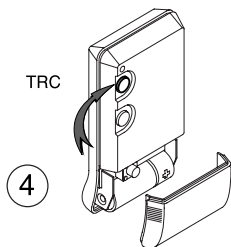
4 Premere il tasto T1 fino a che il LED del ricevitore riprende a lampeggiare
Press the key T1 until the Led of the receiver begins to flash again
Appuyer sur la touche T1 jusqu'à ce que la LED du récepteur recommence à clignoter
Die Taste T1 drücken, bis die Led des Empfängers wieder zu blinken beginnt.
Presione la tecla T1 hasta que el led del receptor vuelva a parpadear
*Pressionar a tecla T1 até que o LED do receptor recomeça a piscar*
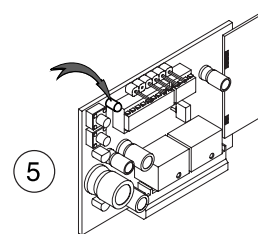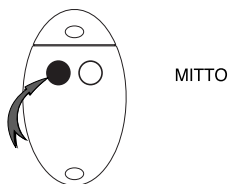
5 Attendere che il led si spenga
Wait for the Led to switch off
Attendre que la led s'éteint
Warten, bis die Led erlischt.
Espere a que el led se apague
Aguardar que o led se apague
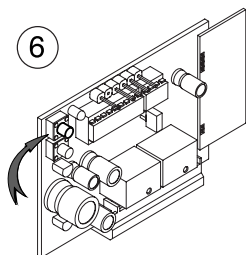
6 Premere una volta il tasto SW2
Press the SW2 once
Appuyer une fois sur la touche SW2
Die Taste SW2 einmal drücken.
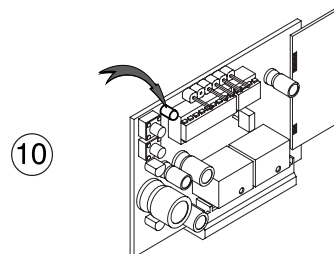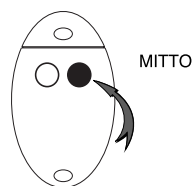Presione una vez la tecla SW2
Pressionar uma vez a tecla SW2

7 IL Led comincia a lampeggiare
The Led begins to flash
La led commence à clignoter
Die Led beginnt zu blinken.
El led empieza a parpadear
O led começa a piscar
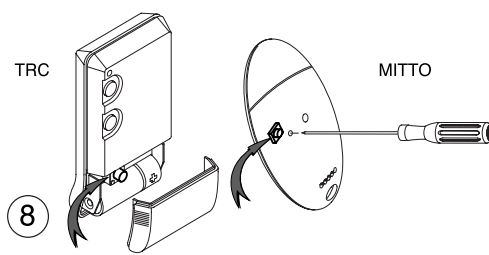
8 Premere il tasto P1 fino a che il Led del ricevitore resta acceso
Press the key P1 until the Led of the receiver stays on
Appuyer sur la touche P1 jusqu'à ce que la Led du récepteur reste allumée
Die Taste P1 drücken, bis die Led des Empfängers eingeschaltet bleibt.
Presione la tecla P1 hasta que el led del receptor se encienda
Pressionar a tecla P1 até que o Led do receptor fica aceso
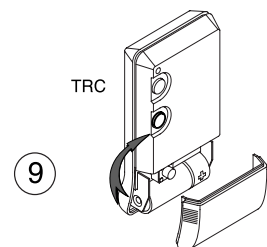
9 Premere il tasto T2 fino a che il LED del ricevitore riprende a lampeggiare
Press the key T2 until the Led of the receiver begins to flash again
Appuyer sur la touche T2 jusqu'à ce que la LED du récepteur recommence à clignoter
Die Taste T2 drücken, bis die Led des Empfängers wieder zu blinken beginnt.
Presione la tecla T2 hasta que el led del receptor vuelva a parpadear
Pressionar a tecla T2 até que o LED do receptor recomeça a piscar

10 Attendere che il led si spenga
Wait for the Led to switch off
Attendre que la led s'éteint
Warten, bis die Led erlischt.
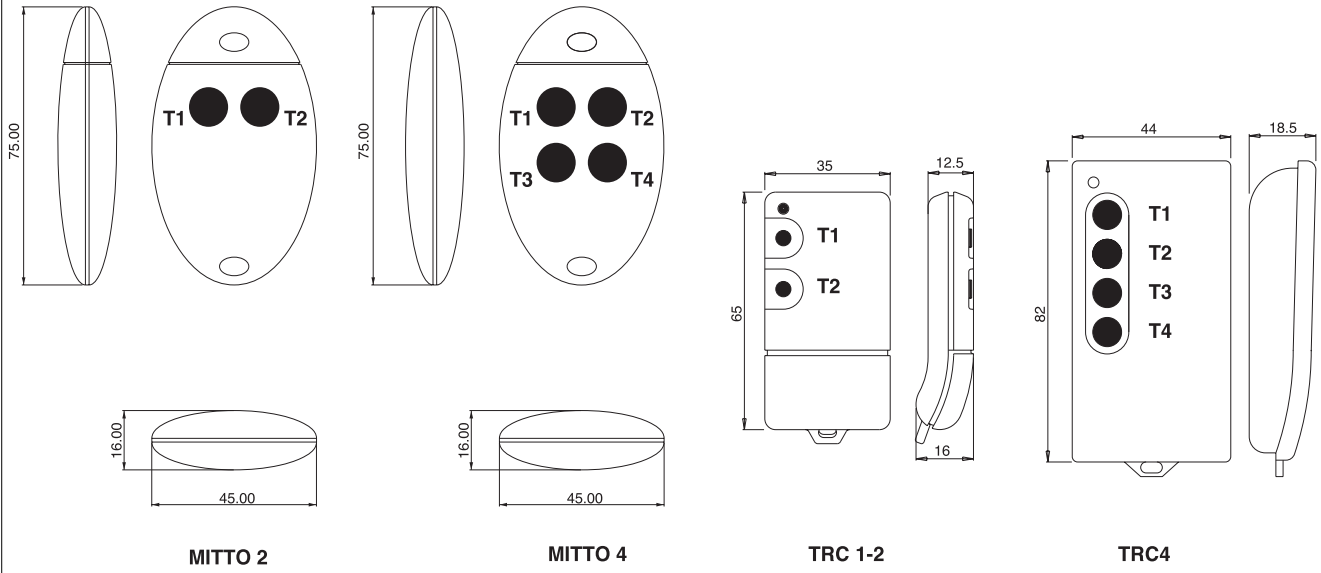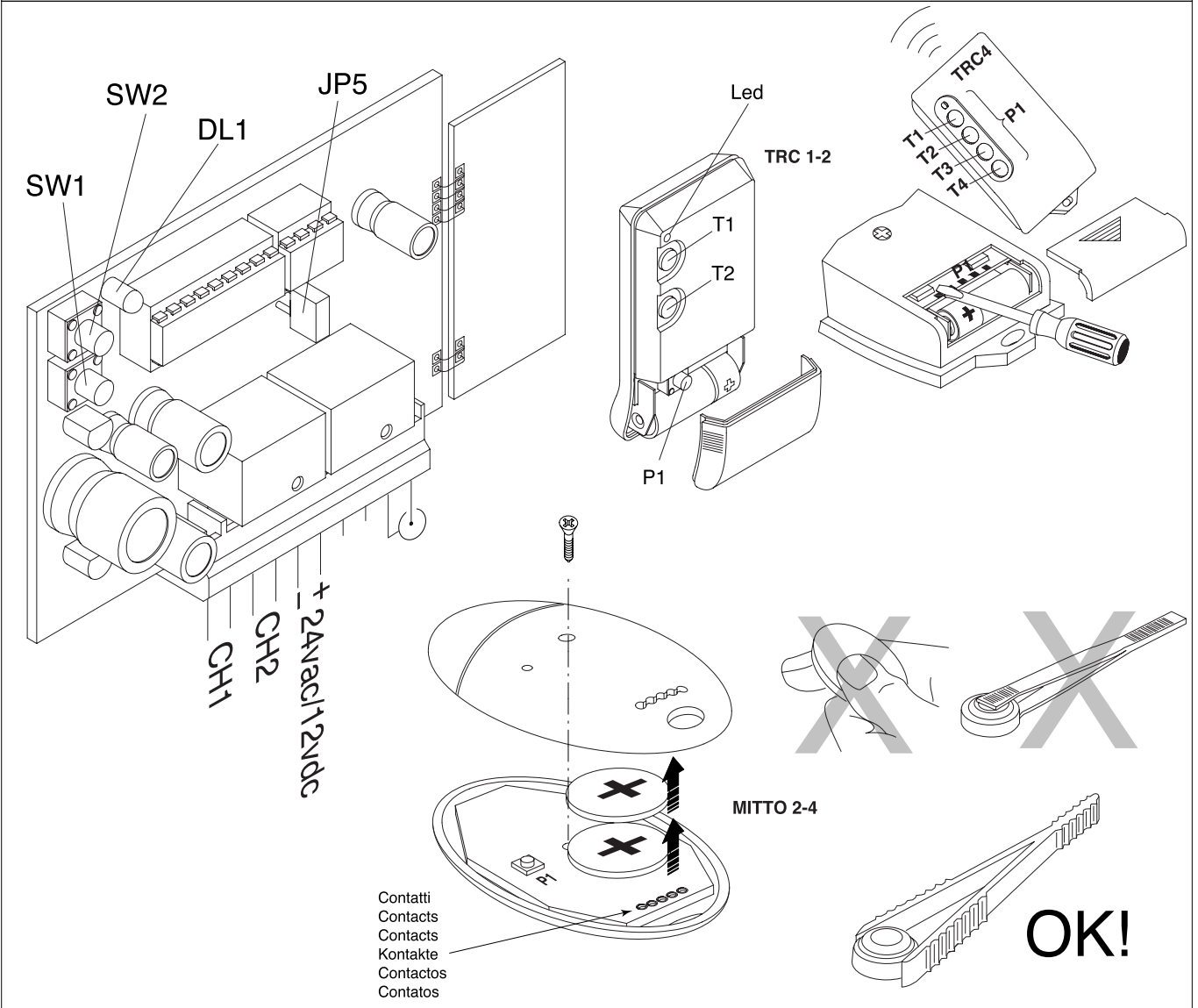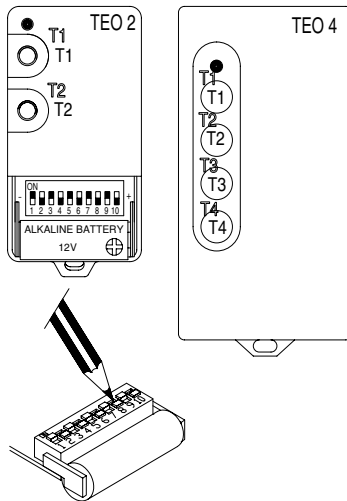Espere a que el led se apague
Aguardar que o led se apague

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Fig. 1

MITTO 2

MITTO 4

TRC 1-2

TRC4

Fig. 2

SW2

JP5

DL1

SW1

Led

TRC 1-2

TRC4

P1

T1
T2
T3
T4

T1

T2

P1

P1

CH1

CH2

+ 24vac/12vdc
_

MITTO 2-4

Contatti
Contacts
Contacts
Kontakte
Contactos
Contatos

OK!

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Fig. 3

TEO 2

T1
T1
T2
T2

ON
1 2 3 4 5 6 7 8 9 10
ALKALINE BATTERY
12V

TEO 4

T1
T1
T2
T2
T3
T3
T4
T4

Fig. 4

UNIPRO

INTRIC 1-2   JP2

UNIFLAT

UNIDA

Contatti
Contacts
Contacts
Kontakte
Contactos
Contatos

UNIFLAT

UNITRC

Contatti
Contacts
Contacts
Kontakte
Contactos
Contatos

UNIFLAT

UNITRC

TRC 4

TRC1-2

UNITRC

TRC1-2

1

3   4

TRC4

1   2

3   4

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Fig. 5

INTRIC 1-2   JP2

UNIFLAT

UNIDA

UNIPRO

UNIFLAT

UNIMITTO

Contatti
Contacts
Contacts
Kontakte
Contactos
Contatos

MITTO 2-4

UNIMITTO

P1

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